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Notice of Allowability	Application No.		Applicant(s)	
	10/718,928		SCHOEB, RETO	
	Examiner		Art Unit	
	Ryan Christensen		2856	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--
 All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to 11/03/2006.
2. ☒ The allowed claim(s) is/are 15-18.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
 - a) ☐ All b) ☐ Some* c) ☐ None of the:
 1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

* Certified copies not received: _____.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.
THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
 - (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached
 - 1) ☐ hereto or 2) ☐ to Paper No./Mail Date _____.
 - (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date _____.

Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

Attachment(s)

- | | |
|---|---|
| <ol style="list-style-type: none"> 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO-1449 or PTO/SB/08),
Paper No./Mail Date <u>11/17/2003</u> 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit
of Biological Material | <ol style="list-style-type: none"> 5. <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) 6. <input type="checkbox"/> Interview Summary (PTO-413),
Paper No./Mail Date _____. 7. <input type="checkbox"/> Examiner's Amendment/Comment 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance 9. <input type="checkbox"/> Other _____. |
|---|---|

DETAILED ACTION

Allowable Subject Matter

The following is an examiner's statement of reasons for allowance:

Regarding claim 15:

The primary reason for the allowance of claim 1 is the inclusion of, "directing the liquid into the plump, operating the pump at a reduced efficiency which is less than half the maximum efficiency of the pump, determining a torque required to operate the pump at the reduced efficiency, and determining the viscosity of the liquid from the torque applied to the pump." It is these features found in the claim, as they are claimed in the combination that has not been found, taught or suggested by the prior art of record, which makes this claim allowable over the prior art. Specifically the prior art does not teach or render obvious the pump having a maximum efficiency, which is the ratio of the forwarding performance of the pump and the mechanical performance of the drive motor, and operating at less than half that efficiency in order to determine the viscosity of a fluid.

U.S. Patent 4,077,251 (Winter) discloses a viscosity measuring device and method including a rotary cylinder. Fluid is directed into the cylinder and the viscosity is determined as a function of torque. Winter does not disclose any maximum efficiency nor does it disclose operating at less than half capacity or efficiency.

U.S. Patent 4,032,391 (Monked) discloses another apparatus for determining viscosity as a function of torque. The pump disclosed in Monked is a gear pump as opposed to a rotary pump. Monked does not explicitly teach operating a pump at less

than half a maximum efficiency, where that efficiency is the ration of the forwarding performance of the pump and mechanical performance of the drive motor. Monked discloses a number of operating conditions. In each example the volumetric efficiency is 90% and above.

U.S. Patent 6,167,752 (Raffer) discloses a rotary viscometer measuring device. Raffer disclose both a controlled shear rate test and a controlled shear stress test, but does not indicate either of these conditions are created by a rotary pump operating a less than half maximum efficiency.

U.S. Patent 6,241,485 (Warwick) discloses the structure of a rotary pump for pumping sewage. Warwick does not disclose using torque in order to determine the viscosity of a fluid.

U.S. Patent 5,307,288 (Haines) discloses a variable speed pump controlled by a microprocessor. The microprocessor is cable of storing conditions and can run the pump at various efficiencies. Haines does not disclose a device for measuring viscosity. Some parameters such as pressure are measured they relate to controlling pump flow, not to determining viscosity of the fluid.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."


Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Ryan Christensen whose telephone number is 571-272-2683. The examiner can normally be reached on Monday - Friday, 8am - 5pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Hezron Williams can be reached on 571-272-2208. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

RSC


HEZRON WILLIAMS
SUPERVISORY PATENT EXAMINER
TECHNOLOGY CENTER 2800